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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,235	06/27/2003	Richard Dryer	02W192	7732
43076	7590	09/30/2004	EXAMINER	
MARK D. SARALINO (GENERAL) RENNER, OTTO, BOISELLE & SKLAR, LLP 1621 EUCLID AVENUE, NINETEENTH FLOOR CLEVELAND, OH 44115-2191			NGUYEN, TRINH T	
			ART UNIT	PAPER NUMBER
			3644	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/609,235

Applicant(s)

DRYER ET AL

Examiner

Trinh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) 16-22 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of Species I, claims 1-15, in the reply filed on 7/27/04 is acknowledged.
2. Claims 16-22 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "50" has been used to designate as a notch and a central portion. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "50" and "52" have both been used to designate the narrow central portion. Corrected drawing sheets in compliance with 37 CFR 1.121(d)

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are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the notch must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of

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the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

6. Claims 1-15 are objected to because of the following informalities: in claim 1, "the propelling charge holder segments" should be rewritten to --the propelling charge holder--; in claim 4, "the segments" should be rewritten to --the propelling charge holder--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, it is not understood what the term "notch" is defined and/or implied.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-5, 12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US 3,915,091).

For claim 1, Smith et al. disclose a projectile comprising: a projectile body (18); and a propelling charge holder (26, 58, 54, 78) separably coupled to the projectile body; and external propelling charge increments (80) at least partially surrounding the propelling charge holder.

For claim 2, Smith et al. further disclose the propelling charge holder includes multiple propelling charge holder segments (26, 58, 54, 78) are separable from one another during flight of the projectile.

For claim 3, Smith et al. further disclose an internal propelling charge increment (72, 32, 122, 28) in a chamber (area within reference numbers 26, 60, 70) enclosed by the propelling charge holder.

For claim 4, Smith et al. further disclose the propelling charge holder have holes (76) therein that allow communication between the chamber and the external propelling charge increments.

For claim 5, Smith et al. further disclose an igniter holder (86) and an igniter (91, 90) that are both at least partially in the chamber.

For claim 12, Smith et al. further disclose the propelling charge holder segments have a curved free shape; and wherein an inward radial force is applied to the propelling charge holder segments to combine them to form the propelling charge holder (note that an inward radial force must be applied into the segments in order to assemble the segments together to form a propelling charge holder).

For claim 14, Smith et al. further disclose an igniter holder with annular flange (area between reference numbers 86 & 88), wherein at least part of the inward radial

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force is supplied by annular flange (note that an inward radial force must be applied into the annular flange in order to assemble the annular flange into the propelling charge holder segments).

For claim 15, Smith et al. further disclose hooked ends (22) of the propelling charge holder segments engage a flange (threading on reference number 16) on an aft protrusion (16) of the body, when the inward radial force is applied to the propelling charge holder segments, and wherein removal of the inward radial force causes disengagement of the hooked ends from the flange (note that an inward radial force must be applied and/or removed into the hooked ends in order to assemble and/or dismantled the hooked ends from the flange).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 6-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 3,915,091) in view of Brandt (US 1,879,840).

Smith et al. disclose most of the claimed invention except for fins hingedly coupled to the body and wherein the fins, when retracted, press against propelling charge holder segments.

Brandt teaches a similar projectile as that of Smith et al. in which Brandt's projectile having a plurality of fins (16, 15, 12) hingedly coupled to the body (1, 4, 7) and

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wherein the fins, when retracted, press against propelling charge holder segments (7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the projectile of Smith et al. so as to include the use of hinged fins, in a similar manner as taught in Brandt, since to do so would allow the fins to be retracted and/or deployed.

For claim 8, Smith et al. as modified by Brandt (emphasis on Smith et al.) further discloses the fins (96) press against a central portion (26) of the propelling charge holder segments, and wherein the central portion of the propelling charge holder segments is closer to a centerline of the projectile than ends of the propelling charge holder segments (note that reference numbers 54 & 58 can be interpreted as the ends of the propelling charge holder segments).

For claim 9, Smith et al. as modified by Brandt (emphasis on Smith et al.) further discloses one of ends of each of the propelling charge holder segments is a hooked end that engages an aft protrusion of the projectile body.

For claim 10, Smith et al. as modified by Brandt (emphasis on Smith et al.) further discloses the aft protrusion includes a flange that is engaged by the hooked ends.

For claim 11 (as best understood), Smith et al. as modified by Brandt (emphasis on Brandt) further discloses the fins (16, 15) each have a notch (the area on the fins which hooks into reference numbers 32 & 33) into which the hooked ends (32, 33) at least partially protrude when the fins are retracted.



For claim 13, Smith et al. as modified by Brandt (emphasis on Brandt) further discloses at least part of the inward radial force is supplied by the fins when the fins are retracted (note that Figure 2 of Brandt shows that when fins 15 & 16 are retracted an inward radial force is supplied by the fins).


**Conclusion**

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as cited on PTO-form 892.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on (703) 305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Trinh T Nguyen  
Patent Ex.  
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